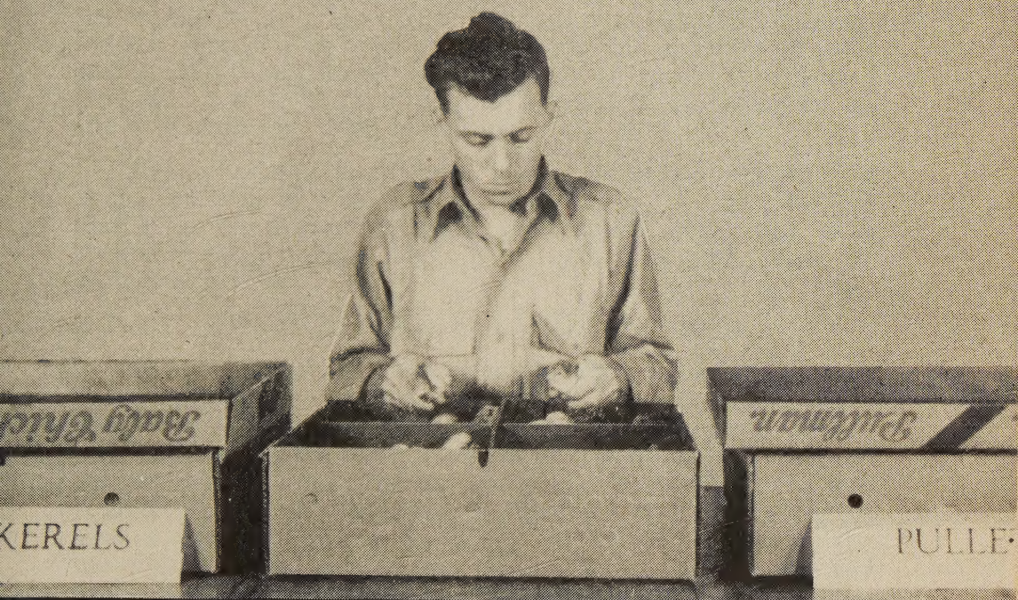


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THE WING-SPOT METHOD FOR COLOR SEXING RHODE ISLAND RED AND NEW HAMPSHIRE CHICKS

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The wings of "red" cockerel chicks carry an identification mark not present on the wings of their sisters. This identification mark in baby cockerels is a white or yellowish white spot on top of the wing in the region of the wing web. The wings of baby pullets are uniform red in color.

Everyone who has tried color sexing Rhode Island Red chicks by this wing-spot method has separated the cockerels from the pullets with an accuracy of 90 to 95 percent, depending on the strain. Since New Hampshire chicks are somewhat lighter colored than Rhode Island Reds, the accuracy in color sexing New Hampshires is usually not as good. It will vary from about 80 to 90 percent in different strains, depending on the uniformity of chick coloration.

The following descriptions and illustrations explain this simple method of color sexing "red" chicks. Suggestions are also given for ways to improve accuracy in separating baby cockerels from pullets in the New Hampshire and Rhode Island Red breeds.

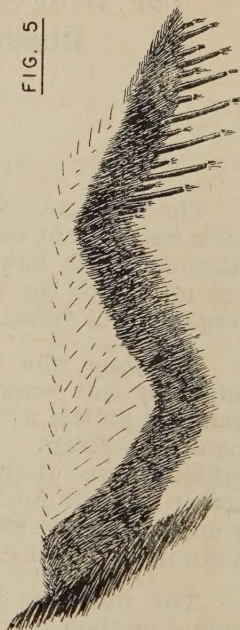
WHERE TO LOOK FOR THE WING-SPOT

The accompanying pictures and diagrams have been prepared to show the location and variations in size of the white wing-spot. Looking down on the back of the chick *with its wings outspread*, the white spot will be found about in the middle part of the wing (Figure 7, page 6). When the white spot is small in size, as illustrated in Figures 1 and 6, it is located toward the back of the wing web and appears to follow the muscle outline of the forearm of the chick. When a chick is found to have this particular white spot on the wings it is always a cockerel. The wings of baby pullets are uniformly red in this location (Figure 8).

The size of the wing spot on the cockerel chicks may be very small or relatively large. The range in size is illustrated in Figures 1 to 5. When the white spot is very large, as in Figure 5, it extends out over the wing web until the upper surface of the entire web is white.

Figures 1 to 5.

Diagrams showing the location and variation in size of the wing spot in cockerel chicks. When the white spot is small as in Fig. 1 it appears as a short blaze along the muscle outline of the chick's forearm. With increasing size more of the wing web becomes white until the extremely large spot covers the entire web and extends along the wing front as in Fig. 5.



Errors in sexing are most likely to occur in uneven and light colored chicks and when the wing-spot is very small or indistinct. Occasionally the cockerel's wing spot is so small that it passes unnoticed and the cockerel may be mistaken for a

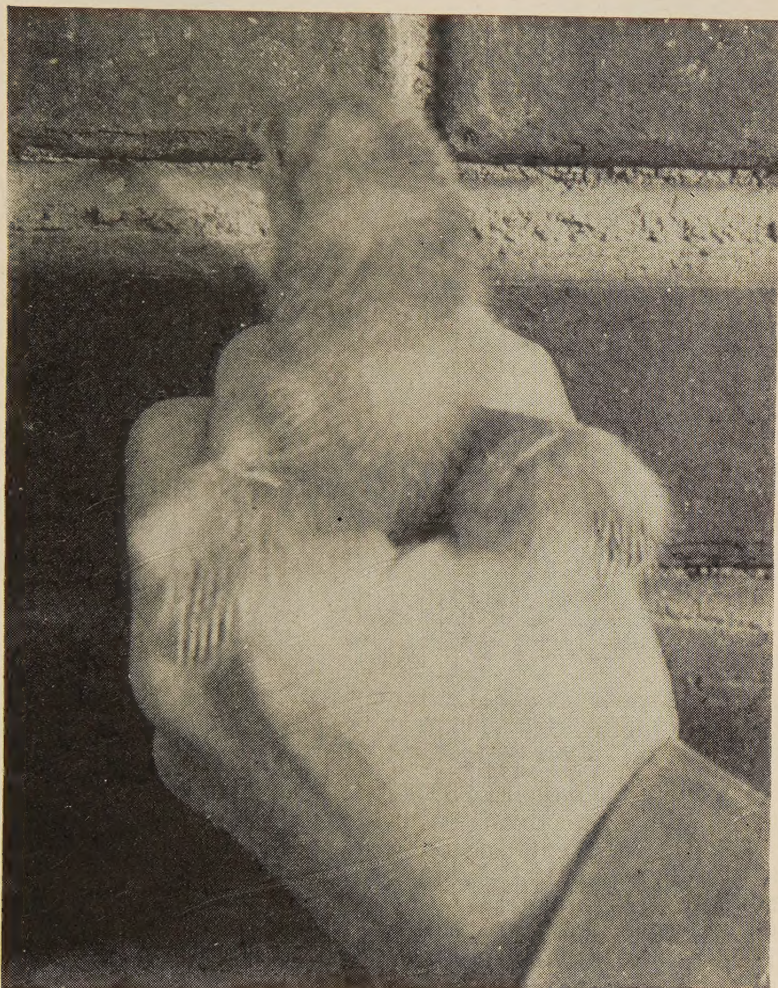


Figure 6.

A New Hampshire cockerel chick having a very small white streak similar to that diagrammed in Fig. 1. If white or yellowish white down is observed in this location on the wing of a "red" chick it is always a male.



Figure 7.

A Rhode Island Red cockerel chick with a large white wing spot. New Hampshire chicks also may have this large white wing spot but they are more difficult to photograph. To increase accuracy in sexing, cockerels of this type should be marked for use to sire the next season's chicks.



Figure 8.

The web region of the baby pullet's wing is always uniformly red and about the color tone of its head and back. (Note the long pinfeathers in this chick's wings. This type of early feathering is a very desirable characteristic in both New Hampshires and Rhode Island Reds.)

pullet. Sometimes the light may strike the wing in such a way that a highlight appears on the wing of a pullet chick and this light reflection may be mistaken for a wing spot.

The chicks may be color sexed as soon as they are "fluffed-out" and dry. A table large enough to hold three chick boxes is desirable. An empty box for the cockerel chicks is placed on one side, another for the pullets on the other side, and the unsexed chicks in the center. Good uniform lighting is best. Some prefer daylight from a north window, while others find a fluorescent light most desirable. The aim is to secure a uniform, flat lighting which will strike the wings uniformly and not cause confusing highlights.

The chick is picked up as illustrated in Figure 9. The chick's head faces away from the sexor, whose thumb and forefinger are underneath the chick's wings. Picking the chick up

in this manner encourages it to stretch out its wings in a position that gives the sexor full view of the upper surface of each wing. Skilled sexors using the wing-spot method may use both hands, picking up two chicks at a time as illustrated in Figure 9.

After a little experience the method is very rapid and causes the chick no inconvenience. In most cases the sex is



Figure 9.

Hold the chicks with the thumb and forefingers under the chick's wings. The chick on the left is a cockerel and the one on the right is a pullet. (The spot on the left wing of the pullet chick is a wing band.)

identified at a glance and the chick placed in the correct box on either side of the unsexed chicks (cover picture). It is a good practice to always place the box for the cockerel chicks on the same side of the table. Then there is little danger of putting cockerels in a pullet box or vice versa.

BREEDING TO IMPROVE ACCURACY

Experiments conducted at the Oklahoma Agricultural Experiment Station demonstrate that it is possible to greatly improve the accuracy of sexing by proper selection of chicks for the breeding flock. The hatcheryman may select the chicks he gives to his flock owner, and the breeder may identify chicks having the desirable color pattern for use to further perpetuate his strain.

The first step is to select chicks which are uniform in color over the head and back. The color does not need to be dark but must be distinctly reddish in tone. With Rhode Island Reds it is preferable to select chicks which are a uniform deep red color. New Hampshires may be a much lighter color tone, but in both breeds it is important that the head and back of each chick be about the same color. Chicks with white heads and dark backs are undesirable for breeders. Each strain should be selected toward a distinct color tone and should not contain some light and some dark colored chicks.

The next step is to identify by toe punch or wing band those cockerel chicks which have a large wing spot (Figures 5 and 7). By using for breeders only those cockerels which had a large wing spot at hatching, the chicks of the next generation become much more distinct. In Rhode Island Reds accuracy was increased from 92.6 to 94.9 percent when a cockerel which had the large wing spot (Figure 7) was mated to pullets which were "red-winged" as chicks. Further tests are in progress to determine whether perfect accuracy is possible in the New Hampshire and Rhode Island Red breeds.